

Behavioral Risk Factor Surveillance System

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Overweight in New York State

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The Centers for Disease Control and Prevention (CDC) provide funding and technical assistance to the Behavioral Risk Factor Surveillance System (BRFSS) which was introduced in New York State in 1983 and has been conducted annually since 1985. Standardized questions developed by CDC are administered via a telephone survey. This survey provides state-specific prevalence estimates of diseases and preventable behaviors attributable to early morbidity and mortality. These data are used to assess health-related behaviors, plan and promote health programs and support legislative decisions.

This report describes the extent of overweight in New York State using information from a variety of sources including the BRFSS, the National Health Interview Survey, the Pediatric Nutrition Surveillance System and surveys of school children conducted in New York State.

The Behavioral Risk Factor Surveillance System – Summary Report is published quarterly. Issues will contain brief summaries on one or more of the risk factors included in each year's survey. Occasionally, issues will summarize special surveys, analysis of trends and more in-depth discussion of specific risk topics. Copies may be obtained by contacting:

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Overweight in New York State

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Overweight has serious adverse effects on health and longevity. The risks of overweight and, in its more extreme form obesity, are associated with elevated cholesterol, high blood pressure, and non-insulin dependent diabetes. It may also be a risk factor in osteoarthritis of the weight-bearing joints. According to Hahn et al. (1), nearly one-quarter of all deaths are attributable to obesity.

Overweight Among Adults

The New York State Behavioral Risk Factor Surveillance System (BRFSS) uses a method for classifying a respondent as overweight based on self-reported height and weight values. A person is considered overweight if the Body Mass Index, which is defined as $\text{weight(kg)}/\text{height(m)}^2$, exceeds 27.8 for men or 27.3 for women. These values are derived from the distribution of the Body Mass Index recorded during the Second National Health and Nutrition Examination Survey and coincide with the 85th percentile for adults 20-29 years of age. During the period 1987-1994, the prevalence of overweight among New York State adults rose 42 percent (19 percent in 1987 compared to 27 percent in 1994).

There are some limitations to these data in estimating the prevalence of overweight. Self-reported data may be affected by the ability of participants to respond honestly and accurately to survey questions. Research conducted in New York State has shown that, in telephone surveys, there is a tendency for people to understate their weight (2). We also know that overweight is higher among low socioeconomic groups, which are underrepresented in telephone surveys because they often lack phones. These biases may result in an overweight prevalence that is lower than it is. In general, these biases have a stronger effect on the interpretation of annual prevalence estimates than of trends, since the effects are likely to remain relatively constant over time.

The New York State Health Interview Survey is the state-specific portion of the National Health Interview Survey, conducted by the National Center for Health Statistics. The

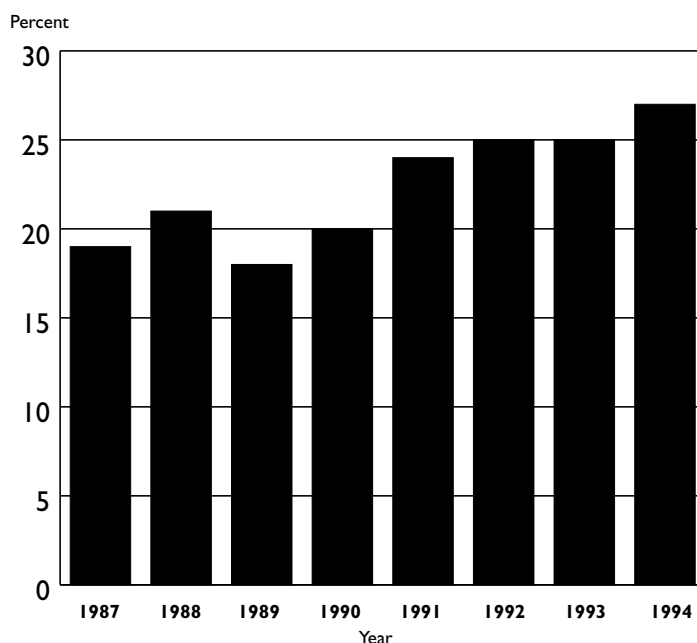


Figure 1 Prevalence of Overweight in New York State, Adults Aged 18 and Older Behavioral Risk Factor Surveillance System

survey provides estimates for the civilian, noninstitutionalized population of New York State. Respondents are classified as overweight using the same method as that used by the BRFSS. The principal difference between the two surveys is that the Health Interview Survey is conducted in a face-to-face interview rather than on the telephone. Height and weight values are self-reported in both surveys.

For the period 1989 to 1991 combined, the proportion of adults considered obese varied from 25.4 percent to 25.9 percent (Table 1). Mean values for subgroups ranged from 23.8 percent (white women) to 39.7 percent (black women). In 1991, the prevalence of overweight estimated from the BRFSS and the National Health Interview-New York State was comparable: 26.3 percent for the BRFSS; 25.6 for the National Health Interview-New York State.

RACE	MALES	FEMALES	TOTAL
White	26.3	23.8	25.0
Black	25.2	39.7	33.6
Total*	25.5	25.7	25.6

* Total includes 'Other' races

Table 1. Percent of Overweight New York Adults, by Race and Sex Group, 1989-1991 National Health Interview Survey-New York State Estimates

Overweight Among School Children

Overweight children have a higher risk of adult obesity, which increases with the age of the child and the severity of the overweight. Overweight children are also at greater risk for heart disease, diabetes, emotional stress, orthopedic disorders and respiratory problems. Surveys of second and fifth grade children in New York State conducted during 1987-90 found a high percentage of children to be overweight and severely overweight (3). The prevalence of overweight was 34.5 percent for school children examined in

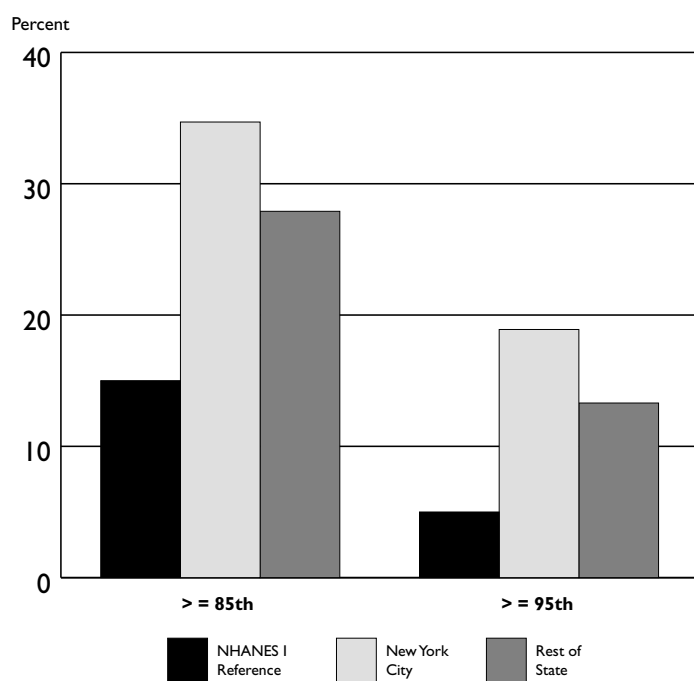


Figure 2 Prevalence of Overweight and Severe Overweight among New York State School Children in Second and Fifth Grade, 1990

New York City and 27.9 percent for children from the rest of the state, when overweight was defined as a Body Mass Index greater than the 85th percentile of the age- and sex-specific values from the first National Health and Nutrition Examination Survey (NHANES I). The prevalence of severe overweight, defined as equal to or greater than the 95th percentile of the reference, was 18.4 percent in New York City and 13.3 percent in the rest of the state. These data are shown in Figure 2.

Overweight Among Preschool Children

The CDC Pediatric Nutrition Surveillance System (PedNSS) monitors the general health and nutritional characteristics of low-income children in the United States who participate in public health programs such as the Special Supplement Nutrition Program for Women, Infants and Children (WIC) (4). PedNSS is used to characterize trends and patterns in key indicators of nutritional status, including childhood growth and weight status. Overweight is defined as weight-for-height greater than 95th percentile of the National Center for Health Statistics growth reference. The PedNSS trends in overweight for the nation and for New York State have been relatively static over time. However, there is considerable variation for the different

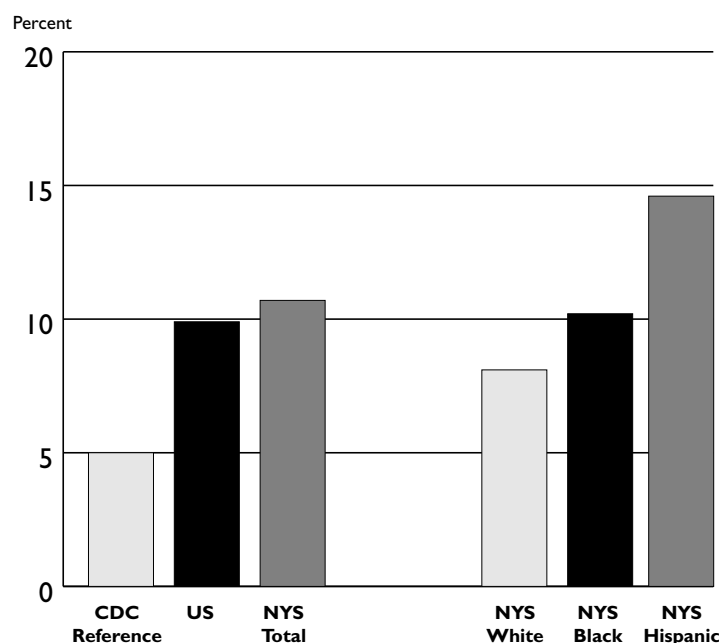


Figure 3 Prevalence of Overweight among Preschool Children in New York State, 1994 Pediatric Nutrition Surveillance System

racial/ethnic groups. As shown in Figure 3, 10.7 percent of the children in the New York State PedNSS were overweight in 1994, compared to 9.9 percent for the United States as a whole. Hispanic preschool children in New York State were more likely to be overweight (14.6 percent) compared to blacks (10.2 percent) and whites (8.1 percent).

Conclusions and Recommendations

Overweight is becoming an increasingly prevalent health problem. The New York State data presented above mirror national trends (5,6). One potential explanation for this increase is the aging of the population; most adults tend to gain weight as they get older. The annual prevalence rates for New York State have not been adjusted for age, but an analysis of national data shows increases in the rates of obesity across all age groups (7). The data also suggest that children in New York State are more overweight compared to the rest of the country leading to a higher prevalence of overweight among adults. Another possible explanation is that the increase in overweight is an unfortunate side effect of successful smoking cessation efforts, since many smokers tend to gain weight once they quit smoking. A recent analysis of national data (NHANES III) found that about 25 percent of the increase in the prevalence of overweight in men and about 17 percent of the increase in women could be attributed to smoking cessation within the past 10 years (6). However, most experts agree that the advantages of smoking cessation outweigh the disadvantages of any resulting weight gain.

Because of the difficulties in treating obesity, public health responses should incorporate the following actions:

- Emphasize the importance of improving eating habits and increasing physical activity, and decrease the emphasis on weight itself as an individual outcome. By focusing on weight, people may pursue weight loss by means that are not always healthy ones (e.g., fad diets, diet pills, skipping meals, purging), and that can result in only short-term weight reduction — underlying eating and activity patterns haven't been changed.
- Emphasize the prevention of overweight, especially in children. This should be done by focusing on establishing good eating and activity habits early in life.
- Implement environmental and policy initiatives that make it easier for people to eat better and be more active. An example of such an initiative is the new regulations for the School Meals Program which, for the first time, specify limits on the fat and saturated fat content of school meals.

References

1. Hahn RA, Teutsch SM, Rothenberg RB, Marks JS. Excess Deaths From Nine Chronic Diseases in the United States, 1986. *Journal of the American Medical Association*, November 28, 1990, Vol. 264, No. 20, 2654-2659.
2. Bowlin SJ et al. Validity of cardiovascular disease risk factors assessed by telephone survey: the behavioral risk factor survey. *Journal of Clinical Epidemiology* 1993; Vol. 46, No. 6, 561-571.
3. Wolfe WS, Campbell CC, Frongillo EA, Haas JD, Melnik TA. Overweight Schoolchildren in New York State: Prevalence and Characteristics. *American Journal of Public Health*. 1994, Vol. 84, 807-813.
4. National Centers for Disease Control and Prevention. Pediatric Nutrition Surveillance System-United States, 1980-1991. In: CDC Surveillance Summaries, November 27, 1992. *Morbidity and Mortality Weekly Report*. 1992, Vol. 41, No. SS-7, 1-24.
5. Troiano, RP, Flegal, KM, Kuczmarski, RJ, Campbell, SM, Johnson, CL. *Archives of Pediatric and Adolescent Medicine*. 1995, Vol. 149, 1085-1091.
6. Kuczmarski, RJ, Flegal, KM, Campbell, SM, Johnson, CL. *Journal of the American Medical Association*. 1994, Vol. 272, 205-211.
7. Flegal, KM, Troiano, RP, Pamuk, ER, Kuczmarski, RJ, Campbell, SM. , *New England Journal of Medicine*. 1995, Vol. 333, No. 18, 1165-70.